Application No. 10/046,374
Reply to Office Action of Jan. 23, 2004

Amendments to the Claims

The following listing of the claims will replace all prior versions, and listings of the claims in the application:

Listing of Claims

1. (Currently amended) In a communication system for transmitting control signals from a remote control to a toy vehicle, the remote control including control switches, an encoder and a transmitter, the toy vehicle including a receiver, a decoder and actuators for controlling the operation of the toy vehicle in accordance with control signals received from the remote control, wherein the improvement comprises:

the encoder generating a continuous, uninterrupted stream of control signal packets which are continuously transmitted at a constant frequency, with each control signal packet, other than the first packet, immediately following the preceding packet in time, each of the packets including a predetermined number of biphase encoded bits, each biphase bit being of the same predetermined width with a fifty percent duty cycle including two transmit elements with one binary state being defined as both of the transmit elements of a bit being opposite, each packet including a first predetermined number of flag bits, the states of which are the same for all packets, a second predetermined number of data bits, the states of which vary depending upon the positions of the control switches, and at least one checksum bit.

2. (Original) The communication system as recited in claim 1 wherein a binary "zero" is defined as both transmit elements of a bit being the same and a binary "one" is defined as both transmit elements of a bit being opposite.

3. (Original) The communication system as recited in claim 1 wherein each packet includes sixteen bits.

4. (Original) The communication system as recited in claim 3 wherein the first predetermined number of flag bits is six.

5. (Original) The communication system as recited in claim 4 wherein the second predetermined number of data bits is eight.

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  6. (Original) The communication system as recited in claim 5 wherein three of the data bits are for controlling the drive functions of the toy vehicle and three of the data bits are for controlling the steering functions of the toy vehicle.

  7. (Original) The communication system as recited in claim 6 wherein two of the data bits are for controlling additional toy vehicle functions.

  8. (Original) The communication system as recited in claim 1 wherein the packet include two checksum bits determined by adding together all of the ones in the data bits and using the lower two bits of the sum.

  9. (Original) The communication system as recited in claim 1 wherein the flag bits are at the leading edge of each packet and are followed by the checksum bit(s) and the data bits.

  10. (Original) The communication system as recited in claim 1 wherein the decoder reads the received control signals at the middle of each transmit element of each bit within the packet.

  11. (Original) The communication system as recited in claim 10 wherein the decoder comprises a microprocessor.

  12. (Currently amended) The communication system as recited in claim 1 wherein the receiver includes a digital phase-locked loop for synchronization of the decoder with the received stream ~~pf~~ of packets.